Ice also broke in Milk River of Montana. Several gorges formed in the vicinity of Havre and there was some local flooding. West of the mountains rains, melting snows, and ice caused several floods in the smaller streams of northern Idaho, Washington, and Oregon, and there was much flooding of lowlands as well as serious interruption of railroad and highway traffic.

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
East Gulf drainage					
	Feet			*Feet*	
Tombigbee: Lock No. 4, Demopolis, Ala.	39	2	8	43.4	Jan. 5.
Pearl: Jackson, Miss.	20	[1]	12	24.2	Jan. 7.
West Pearl: Pearl River, La.	13	3	11	14.1	Jan. 5, 6.
Mississippi drainage					
Tuscarawas: Gnadenhutten, Ohio	9	1	2	10.7	Jan. 1.
Wabash:					
Lafayette, Ind.	11	20	21	12.6	Jan. 21.
Covington, Ind.	16	21	21	16.1	Jan. 21.
Tippecanoe: Norwoy, Ind.	6	5	17	6.5	Jan. 11, 12.
		19	20	6.3	Jan. 20.
		25	26	6.0	Jan. 26.
Illinois:					
Morris, Ill.	13	5	7	[3] 13.7	Jan. 6.
Peru, Ill.	14	[1]	[4]	20.0	Dec. 18–19.
Henry, Ill.	10	[1]	[1]	14.4	Dec. 17–18.
Peoria, Ill.	18	[1]	2	20.9	Dec. 18–20.
Havana, Ill.	14	[1]	[4]	18.1	Dec. 19.
Beardstown, Ill.	14	[1]	[4]	19.3	Dec. 16–18.
Pearl, Ill.	12	[1]	5	15.8	Dec. 20.
		14	29	13.0	Jan. 19, 22.
Petit Jean: Danville, Ark.	20	19	21	21.8	Jan. 20.
Black:					
Corning, Ark.	11	1	1	11.0	Jan. 1.
		21	30	11.7	Jan. 25.
Black Rock, Ark.	14	[1]	1	25.3	Dec. 15.
Cache: Patterson, Ark.	9	25	28	9.6	Jan. 27.
West Gulf drainage					
Trinity: Trinidad, Tex.	28	1	4	29.1	Jan. 2, 3.
Pacific drainage					
Willamette: Harrisburg, Oreg.	7	2	8	9.5	Jan. 2.
		14	15	9.8	Jan. 14.

[1] Continued from last month.
[3] Ice reading.
[4] Continued at end of month.

MEAN LAKE LEVELS DURING JANUARY, 1928

By UNITED STATES LAKE SURVEY

[Detroit, Mich., February 3, 1928]

The following data are reported in the Notice to Mariners of the above date:

Data	Lakes [1]			
	Superior	Michigan and Huron	Erie	Ontario
Mean level during January, 1928:	*Feet*	*Feet*	*Feet*	*Feet*
Above mean sea level at New York	602.18	578.72	571.26	246.04
Above or below—				
Mean stage of December, 1927	−0.14	−0.06	−0.35	+0.39
Mean stage of January, 1927	+0.74	+0.52	+0.15	+0.76
Average stage for January, last 10 years	+0.57	−0.50	−0.04	+0.96
Highest recorded January stage	−0.60	−3.95	−2.29	−1.56
Lowest recorded January stage	+1.73	+1.34	+1.22	+2.24
Average departure (since 1860) of the January level from the December level	−0.25	−0.11	−0.07	−0.02

[1] Lake St. Clair's level: In January, 1928, 574.04 feet.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, JANUARY, 1928

By J. B. KINCER

General summary.—The outstanding features of the weather for January, 1928, as affecting farming operations, and particularly winter crops, were the cold wave of unusual severity which overspread the Southeast at the beginning of the month, and the persistent drought in the Southwest, extending from western Nebraska and eastern Colorado southward. The cold wave caused heavy damage to winter truck crops in coast sections from Texas to southeastern Virginia, with all but the hardier varieties killed in the extreme Southeast, except in limited areas. Citrus fruits were also damaged considerably, although old groves escaped serious harm, as a rule. In the Southwest very little precipitation occurred, and winter grain crops were badly in need of moisture over a considerable area.

Following the freeze in the South, showers and much warmer weather were favorable in reviving hardy truck that had been previously damaged, and the mild, open weather permitted active field operations throughout the second decade. In the interior States, however, continued absence of snow cover was unfavorable for grass and grain crops in many sections. The last decade had generally warm weather for the season over the western half of the country and low temperatures in the East, and outdoor operations made better advance in the former, and less progress in the latter districts. The sharp freeze the latter part of the period in Southeastern States did no great amount of harm, except along the southeast Florida coast where some crops, particularly tomatoes, were damaged or killed.

Small grains.—Early in the month unseasonably warm weather in the interior States removed the snow cover from important grain areas and left fields generally bare over the principal wheat-producing sections east of the Rocky Mountains. Thereafter, there was but little snow protection, and the rather frequent alternate thawing and freezing were unfavorable for the wheat crop over the eastern half of the belt. In the western portion conditions were more favorable, aside from the need of moisture in parts of the upper Mississippi Valley, in Nebraska, and from western Kansas southward. In the lower Missouri Valley, including eastern Kansas, the moisture from melting snows was favorable and winter grains continued in apparently good condition in most districts. In the far Northwestern States, including Montana, Idaho, Oregon, and Washington, conditions continued generally favorable for winter grains, with fields mostly well protected by snow. In the South, winter oats suffered severely from the freeze early in the month, and reports thereafter were generally unfavorable.

Miscellaneous crops.—In the Ohio Valley, the absence of snow, with alternate freezing and thawing, was unfavorable for meadows. In the Southwest, continued dryness unfavorably affected the range, but in most other portions of the great western grazing districts conditions were favorable, while the generally mild, open weather permitted much grazing in the northern Great Plains. Livestock continued in fair to good condition in most